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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/808,867

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Yoshiyuki Ikezaki

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6661

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01/19/2005

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EXAMINER

VO, ANH T N

ART UNIT

PAPER NUMBER

2861

DATE MAILED: 01/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/808,867

Applicant(s)

IKEZAKI, YOSHIYUKI

Examiner

Anh t.n. Vo

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19 and 20 is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 2-18 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/14/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The references cited on PTO 1449 have been considered

CLAIM REJECTIONS

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in-

- (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
- (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claim 1 is rejected under 35 USC 102 (e) as being anticipated by Shinada et al. (US Pat. 6,643,738).

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Shinada et al. disclose in Figures 1-9 an ink cartridge for use in an ink jet printing apparatus comprising:

- an inkjet head (50) that is driven to eject ink to a recording medium (not shown);
- a carriage (51) mounting the inkjet head (50), the carriage being reciprocally movable in a second direction which is perpendicular to the first direction;
- a movable ink tank (1 or 101 or 201) that is mounted on the carriage (51), the movable tank having an ink storing chamber (60), the ink tank having an ink introducing channel (73 or 74) and an ink discharging opening (4 or 28), ink supplied through the ink introducing channel (73 or 74) being stored in the ink storing chamber (60), the ink stored in the ink storing chamber being discharged through the ink discharging opening (4 or 28) to the inkjet head (50); and
- at least one wall (83) provided in the ink chamber (60), the at least one wall extending vertically to divide the ink chamber (60), in the horizontal direction, into a plurality of rooms (60a, 60b), the plurality of rooms communicating with each other at upper portion (83a) which are above an upper end of the at least one wall (83), a first room (60b), which is one of the plurality of rooms (60a, 60b), being provided with the ink introducing channel (73 or 74), wherein a horizontal cross-sectional area of at least one second room (60a), which one of the plurality of rooms (60a, 60b) other than the first room (60b), within a predetermined vertical range from the upper end of the at least one wall is equal to or smaller than that of the first room (60b) (Fig. 9).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior arts are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 2-18 are rejected under 35 USC 103 (a) as being unpatentable over Shinada et al. (US Pat. 6,643,738) in view of Tsukada (JP Pat. 20011328279) and further in view of Erickson (US Pat. 6,164,766).

Shinada et al. disclose the basic features of the claimed invention were stated above but do not disclose a horizontal cross-sectional area of the at least one second room below the predetermined vertical range is greater than the horizontal cross-sectional area thereof within the predetermined vertical range; wherein horizontal cross-sectional areas of the plurality of the rooms other than the first room below the predetermined vertical range are greater than the horizontal cross-sectional areas thereof within the predetermined vertical range; wherein at least one room of the plurality of the rooms other than the first room has a vertical range, in the vicinity of the upper end of the at least one wall, in which the horizontal cross-sectional area is fixed; wherein the at least one second room has a vertical range, below the predetermined vertical range, in which the horizontal cross-sectional area increases toward a lower portion thereof; and a stationary ink tank which does not move when the carriage moves; and a tube member that connects the stationary ink tank and the movable ink tank to allow the ink to be supplied from the stationary ink tank to the movable ink tank.

Nevertheless, Tsukada et al. disclose in Figures 1-4 and 8 a liquid container comprising:

- an ink cartridge (194) having a partition (212c) that divides an ink chamber into at least one first room (213a) and at least one second room (213b);
- a horizontal cross-sectional area of the at least one second room (213b) below the predetermined vertical range is greater than the horizontal cross-sectional area thereof within the predetermined vertical range;
- wherein horizontal cross-sectional areas of the plurality of the rooms (213a, 213b) other than the first room (213a) below the predetermined vertical range are greater than the horizontal cross-sectional areas thereof within the predetermined vertical range;

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- wherein at least one room of the plurality of the rooms other than the first room has a vertical range, in the vicinity of the upper end of the at least one wall, in which the horizontal cross-sectional area is fixed; and
- wherein the at least one second room (213b) has a vertical range, below the predetermined vertical range, in which the horizontal cross-sectional area increases toward a lower portion thereof.

Furthermore, Erickson discloses in Figures 1-3 an ink refill system comprising a stationary ink tank (14) which does not move when the carriage (4) moves; and a tube member (60) that connects the stationary ink tank (14) and the movable ink tank (12) to allow the ink to be supplied from the stationary ink tank (14) to the movable ink tank (12).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to incorporate the teaching of Tsukada et al. and Erickson in the Shinada et al. ink jet printing apparatus for the purpose of supplying ink to the ink cartridge from the stationary ink tank with a negative pressure condition.

Citation of Pertinent Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. These prior art references (US Pat. 6,170,941, US Pat. 6,206,513, US Pat. 6,238,042; US Pat. 6,247,803) cited in the PTO 892 form show an ink cartridge which is deemed to be relevant to the present invention. These references should be reviewed.

Allowable Subject Matter

Claims 2-11 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims. These claims would be allowable because none

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of the prior art references of record teaches an ink jet printer comprising a horizontal cross-sectional area of at least one second room below a predetermined vertical range that is greater than the horizontal cross-sectional area thereof within the predetermined vertical range in the combination as claimed.

Claims 12-18 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims. These claim would be allowable because none of the prior art references of record teaches an ink jet printer comprising a horizontal cross-sectional area of at least one first room below the predetermined vertical range that is greater than the horizontal cross-sectional area thereof within the predetermined vertical range in the combination as claimed.

Claim 19 is allowed. This claim would be allowable because none of the prior art references of record teaches an ink jet printer comprising an upper portion of an ink chamber that includes a first vertical range above the upper end of at least one wall and a second vertical range above the first vertical range, a horizontal cross-sectional area in the second vertical range is smaller than that in the first vertical range in the combination as claimed.

Claim 20 is allowed. This claim would be allowable because none of the prior art references of record teaches an ink jet printer comprising in the combination as claimed.

CONCLUSION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Anh Vo, whose telephone number is (571) 272-2262.

The examiner can normally be reached on Tuesday to Friday from 9:00 A.M. to 7:00 P.M..

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The fax number of this Group 2800 is (703) 872-9306.

A handwritten signature in black ink, appearing to read 'ANH T. N. VO', with a long horizontal flourish extending to the right.

ANH T. N. VO
PRIMARY EXAMINER

January 13, 2005